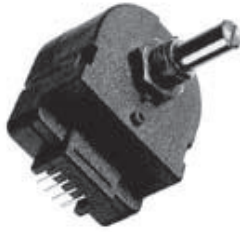


Full 360° Smart Sensor (Hall Effect Technology)


RoHS
COMPLIANT

FEATURES

- Absolute ratiometric output over 360° range with no dead band
- Self-contained package not requiring external electronic interface
- Contactless technology
- Reverse polarity protection
- Non volatile positioning output
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

QUICK REFERENCE DATA

| | |
|------------------|-------------------------------------|
| Sensor type | ROTATIONAL, single turn hall effect |
| Output type | Output by pins (connector) |
| Market appliance | Industrial |
| Dimensions | 33 mm x 44 mm x 20 mm |

The model 601-HE represents a new generation of smart sensors in contactless technology based on the hall effect principle. This unique electronic device is a self-contained package which provides an analog electrical output over a full 360° without the need of external electronics. The low power consumption and non-volatile output makes this universal sensor the real cost-effective alternative to encoders.

STANDARD ELECTRICAL SPECIFICATIONS

| PARAMETER | |
|-------------------------|---|
| Supply | 4.5 V _{DC} to 5.5 V _{DC} |
| Supply current | 16 mA max. |
| Over voltage protection | 10 V |
| Independent linearity | ± 1 % |
| Electrical track | 360° continuous |
| Analog voltage output | 5 % to 95 % of supply (ratiometric) CW or CCW see graphs on next page |
| Output ramp slope | Electrically switchable - see graphs |
| Temperature coefficient | V _{out} /ΔT 125 μV/°C typ. |
| Hysteresis static | 0.8° max. |

MECHANICAL SPECIFICATIONS

| | |
|-------------------------|-----------------------|
| Rotation | 360° continuous |
| Rotational speed (max.) | 120 RPM |
| Operating torque max. | 0.25 oz.-in (18 g-cm) |
| Weight | 30 g |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------------|--------------------|
| Operating life | 5 000 000 Cycles |
| Operating temperature range | - 45 °C to + 85 °C |
| Storage temperature range | - 45 °C to + 85 °C |
| Sealing | IP54 |

ORDERING INFORMATION/DESCRIPTION

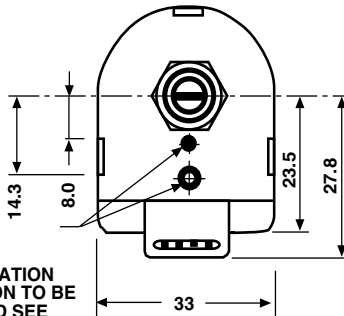
| 601 HE | 0000 | BO1 | e4 | | | | | | | | | | | | | | |
|----------------|--|----------------|-------------|------------|------|-----|-----|------|-----|---|------|---|-----|------|---|---|--|
| MODEL | CONFIGURATION CODE | PACKAGING | LEAD FINISH | | | | | | | | | | | | | | |
| | | Box of 1 piece | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Product Number</th> <th>Ø 1.57 PIN</th> <th>Ø 3.18 PIN</th> </tr> </thead> <tbody> <tr> <td>0000</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>0001</td> <td>Yes</td> <td>-</td> </tr> <tr> <td>0002</td> <td>-</td> <td>Yes</td> </tr> <tr> <td>0003</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | Product Number | Ø 1.57 PIN | Ø 3.18 PIN | 0000 | Yes | Yes | 0001 | Yes | - | 0002 | - | Yes | 0003 | - | - | |
| Product Number | Ø 1.57 PIN | Ø 3.18 PIN | | | | | | | | | | | | | | | |
| 0000 | Yes | Yes | | | | | | | | | | | | | | | |
| 0001 | Yes | - | | | | | | | | | | | | | | | |
| 0002 | - | Yes | | | | | | | | | | | | | | | |
| 0003 | - | - | | | | | | | | | | | | | | | |

SAP PART NUMBERING GUIDELINES

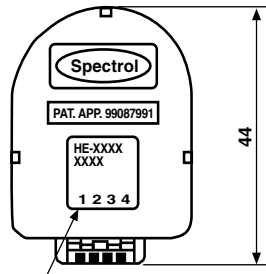
| 601 HE | 0001 | B01 |
|--------|-------------------|-----------|
| MODEL | PIN CONFIGURATION | PACKAGING |



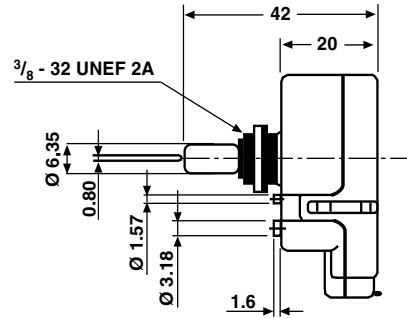
DIMENSIONS in millimeters



ANTI-ROTATION PIN OPTION TO BE SPECIFIED SEE ORDERING INFORMATION



PRODUCT NO. DATE CODE AND TERMINAL I.D. LABEL

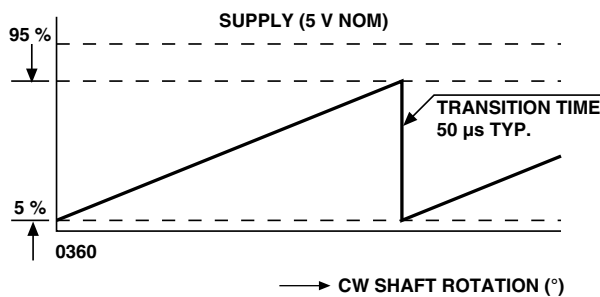


| PIN CONNECTIONS | FUNCTION |
|-----------------|---|
| 1 + 5 V | Supply |
| 2 0 V | |
| 3 Output | O/P voltage |
| 4 Direction | Connected to 0 V: CCW Open circuit or connected to 5 V: CW |

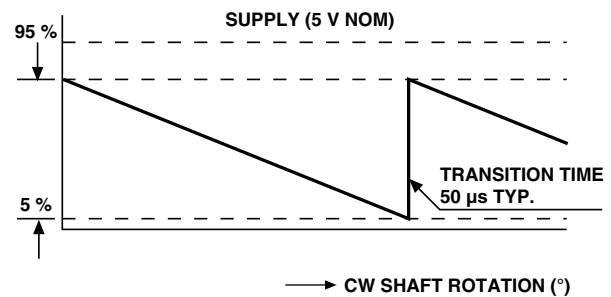
| MATERIAL SPECIFICATIONS | |
|--|---|
| Housing | Plastic |
| Bushing | Brass, nickel plated |
| Shaft | Stainless steel |
| Pin terminal connector | Gold plated |
| Output connection | Pin header to suit IDC connectors. e.g. Panduit C100 - F22 and Molex 7880 |
| Bushing mount hardware lock washer, internal tooth | Steel, nickel plated |
| Panel nut | Brass, nickel plated |



| CABLE ASSEMBLY FOR CONNECTION | |
|-------------------------------|-----------------------|
| Part number | 601-1056-0000 |
| Description | Molex KK |
| | 4-way crimp connector |
| | 4 wire (250 mm) |



MODEL: 601 HE when pin 4 connected to 5 V or open circuit



MODEL: 601 HE when pin 4 connected to 0 V



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